

REMARKS

Claims 1-12 are pending. By this amendment, the Drawings, Specification and claim 12 have been amended. Reconsideration and allowance are respectfully requested in view of the above amendments and the following remarks. No new matter is believed added.

In the Office Action, the Title has been objected to because it is allegedly not descriptive. Applicants have revised the title so that it is no longer reflective of the cancelled method claims. Applicants submit that the amended Title is identical to the preamble of the pending independent claims. As such, Applicants submit that the Title is descriptive of the invention.

The Drawings have been objected to because it is allegedly not clear whether the label "Related Art" on FIGS. 1 and 2 is "Prior Art." Applicants have changed the labels on FIGS. 1 and 2 to recite "Prior Art." Accordingly, withdrawal of the objection is respectfully requested.

Claim 12 is rejected under 35 U.S.C. §112, second paragraph as allegedly being indefinite. Specifically, the Office is asserting that it is not clear what is meant by "and wherein a decrease of approximately 30% for a specific on resistance of the device." Applicants have amended claim 12 to further clarify the invention. Specifically, under the present invention, a thickness of approximately 1200Å of the second gate oxide will result in both: (1) an increase from approximately $1e^{12}cm^{-2}$ to approximately $2e^{12}cm^{-2}$ of a maximum allowable charge; and (2) a decrease of approximately 30% of a specific-on-resistance.

Claims 1-5, 7-9 and 11 are rejected under 35 U.S.C. §103(a) as being obvious over Merchant (U.S. Patent No. 5,412,241) in view of Applicants' Related Art. Specifically, the Office is asserting that Merchant discloses each and every feature of the claimed invention with

the exception of: (1) a second gate oxide; and (2) a second gate oxide formed over a portion of the first gate oxide. However, the Office is alleging that Applicants' Related Art shows such features.

Applicants assert that this rejection is defective because the cited references, taken alone or in any combination, fail to teach or suggest each and every feature of the claimed invention as required by 35 U.S.C. §103(a). To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

It is respectfully submitted that the Office has misinterpreted Applicants' Related Art, and that the cited combination of references fail to teach or suggest a second gate oxide formed over a portion of the first gate oxide. Specifically, the Office is contending that region 50 shown in FIG. 2 of the present application is a second gate oxide. This contention is incorrect since neither FIG. 1 nor FIG. 2 shows (or even attempts to show) a second gate oxide. Rather, region 50 is merely indicating a general area where a second gate oxide will be positioned under the present invention. As can be seen in FIG. 2, reference numeral 50 leads to a box and not to a second gate oxide. The only material formed over the single gate oxide 44 of the Related Art device shown in FIGS. 1 and 2 is a field plate 42. A second gate oxide is shown only in FIG. 3, which is not Related Art. Referring to FIG. 3 and its accompanying description, the second gate

oxide 126 is positioned over a portion of the first gate oxide 124 in gate region 130, which underlies field plate 116. In comparing FIG 3 to FIGS. 1 and 2, it is clearly seen that such a feature does not exist in the Related Art. Accordingly, because the cited combination of art fails to teach each and every feature of the claimed invention, Applicants respectfully request withdrawal of this rejection.

Claims 6 and 10 are rejected under 35 U.S.C. §103(a) as being unpatentable over Merchant in view of Applicants' Related Art and Seeds et al. (U.S. Patent No. 3,936,858). The Office is contending that the Merchant and Applicants' Related Art teach each and every feature of the claimed invention with the exception of the second gate oxide having a thickness in a range of approximately 900-1200Å, a feature allegedly taught by Seeds et al. Further, claim 12 is rejected under 35 U.S.C. §103(a) as being unpatentable over Merchant in view of Applicants' Related Art, Seeds et al. and Shirahata et al. (U.S. Publication No. 2002/0175380). The Office is arguing that Merchant, Applicants' Related Art and Seeds et al. teach each and every feature of the claimed invention with the exception of an increase from approximately $1\text{e}^{12}\text{cm}^{-2}$ to approximately $2\text{e}^{12}\text{cm}^{-2}$ of a maximum allowable charge and a decrease of approximately 30% of a specific-on-resistance of the device. However, the Office is contending that Shirahata et al. teach such features.

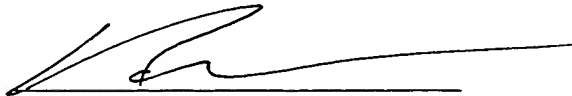
In view of the above arguments made in support of allowance of claims 1-5, 7-9 and 11, Applicants submit that both of these rejections are defective because the cited combinations of art fail to teach each and every feature of the claimed invention. Specifically, none of the cited references teach or suggest a second gate oxide formed over a portion of the first gate oxide.

Accordingly, Applicants respectfully request withdrawal of these rejections.

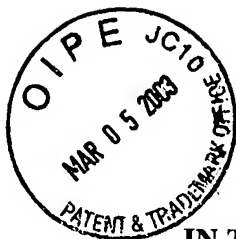
In light of the above, Applicants submit that all claims are in condition for allowance. If the Examiner believes that anything further is necessary to place the application in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney at the telephone number listed below.

Respectfully submitted,

Dated: 2/28/03


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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Letavic et al.)	Examiner: Lewis, M.
)	
Application No.: 10/015,847)	Art Unit: 2822
)	
Filed: 12/10/2001)	
)	
For: DUAL GATE OXIDE HIGH-VOLTAGE)	
SEMICONDUCTOR DEVICE)	
(as Amended))	

Commissioner for Patents
Washington D.C. 20231

SEPARATE MARKUP SHEET

In the Specification

Page 1, line 1, please amend the TITLE as follows:

**DUAL GATE OXIDE HIGH-VOLTAGE SEMICONDUCTOR DEVICE [AND
METHOD FOR FORMING THE SAME]**

Page 16, line 1, please amend the header as follows:

**DUAL GATE OXIDE HIGH-VOLTAGE SEMICONDUCTOR DEVICE [AND
METHOD FOR FORMING THE SAME]**

In the Claims

Please amend claim 12 as follows:

12. (Amended) The device of claim 8, wherein a thickness of approximately 1200Å [for] of the second gate oxide results in an increase from approximately $1\text{e}^{12}\text{cm}^{-2}$ to approximately $2\text{e}^{12}\text{cm}^{-2}$ [for] of a maximum allowable charge[,], and [wherein] a decrease of approximately 30% [for] of a specific-on-resistance, of the device.